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(54) Title: METHOD OF ISOLATING BINDING PEPTIDES FROM A COMBINATORIAL PHAGE DISPLAY LIBRARY AND PEPTIDES PRODUCED THEREBY

(57) Abstract: A method is provided for identifying and isolating peptides capable of binding of inorganic materials such as silica, cobalt, iron, or oxides thereof using a combinatorial phage display peptide library. In the method of the invention, a combinatorial phage display library is used to isolate and select the desired binding peptides by a series of steps of target binding of phage with the inorganic material of interest, elution and purification of the bound phages, and amplification to determine the sequences of phages producing the desired binding peptides. The binding peptides of the invention are particularly advantageous in that they may be used as templates to guide the development of useful structures on a nanometric scale.

WO 03/078451 A2

